



8 August 2017

Via ECFS

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, DC 20554

Re: Notice of *Ex Parte* Communication  
*Wireless Emergency Alerts*, PS Docket No. 15-91

Dear Ms. Dortch:

On 4 August 2017, the undersigned along with Jason Whitehorn, Annie Vithayathil, and Paula Boyd, all from Microsoft Corporation, spoke by telephone with Marcus Brown, Megan Henry, Linda Nagel, and James Wiley from the Commission's Public Safety and Homeland Security Bureau (PSHSB) to discuss matters pertaining to improvements to the wireless emergency alert system under consideration in the above-referenced docket. We responded to questions from the PSHSB participants with the following information:

**WEA alert message preservation**

- Smartphones running the Windows 10 Mobile operating system support WEA message preservation unless/until the user deletes the message.
- It is technically feasible to retain an emergency alert on the device for a specified short period of time (e.g., 24 hours) *from the time the message was received on the device* subject to time changes on the device instituted by the user, alternative date stamps from the network, and other edge case scenarios.
- The space requirement for retaining an alert message for 24 hours, for example, should not present an obstacle insofar as the alert is in the current text-only format.
- If the Commission is inclined to require WEA message preservation, it should specify the minimum amount of time for which a message should be retained. Ultimately, we try to design our user interface to respect our users' wishes. Any requirement to retain an emergency alert for a specified period of time should not block or prevent deletion of the emergency alert by the user.
- Microsoft counsels against a mandatory delete requirement.

### **WEA alert message caching**

- We were asked whether consumers should be provided with an additional option beyond opt-in or opt-out that would allow them to avoid interruption by emergency alerts but to maintain the text of the emergency alerts themselves on the device for the user's reference. Although this would be technically feasible, the option would add complexity, impose expense for development, and increase the risk of error in use.

### **Multi-lingual alerting**

- The availability of alerts in a multitude of languages is subject to, among other things, the fonts available on the device. Non-Latin (e.g., East Asian) language fonts may not always be loaded onto North America smartphones because of the space they require.
- The message originator should perform the translation.
- Reliance on machine translation for mission-critical use cases like wireless emergency alerts warrants careful consideration. Microsoft offered to make machine translation experts available to the Bureau to discuss this possibility further.
  - If the Commission proceeds with use of machine translation for wireless emergency alerts, it should consider ways to extend liability protection to the translation provider(s).
- As an alternative to machine translation, the use of pre-translated messages pre-loaded into devices would encounter the same font limitations that simultaneous translated messages would encounter. If the character set is not enabled on the phone, the alert would need to be presented in English.
  - The rate of changing these pre-loaded messages would be relatively slow *e.g.*, the normal set of considerations and preparations that are required for software updates.

### **Geo-targeting**

- We asked whether there were any empirical determinations that existing mechanisms for geographically targeting recipients of wireless emergency alerts were reducing end user participation in the program. The PSHSB participants on the call were unaware of any empirical data or study to correlate end user willingness to receive alerts with end user perceptions about the geographic relevance of alerts they received. The PSHSB indicated that some emergency managers declined to use the system because of concerns caused by over-alerting.
- Microsoft has concerns about the dangers of under-alerting. Affected and interested individuals may not receive potentially life-saving alerts due to the exclusion caused by geo-targeting goals the Commission is considering.
- A GPS location fix will be required if more precision is needed than cell tower-based geo-targeting provides. With more location precision, more power is used, more time is needed for the accurate location fix, and more things can go wrong in trying to ascertain the device location.

- The use of a GPS location fix may be inhibited by signal disruption due to urban canyons, buildings, foliage, and the like.
- GPS fixes for geo-targeting can reduce device power availability during times of emergency and can be material if the alerts are sent frequently. We would not expect GPS fixes for geo-targeted emergency alerts to cause significant power drain if those alerts are issued infrequently. Even devices in the region that do not ultimately receive the alert will experience a power reduction from the requested GPS fix.
- If the Commission implements a GPS-based geo-targeting solution, it should have a default fallback of displaying the alert on a device if the device location cannot be established within a certain period of time and it should specify that period of time.
- The Commission should discuss with chipset manufacturers the technical feasibility of its 0.1 mile overshoot geo-targeting proposal, including the time to get a GPS fix using existing capabilities.

### **Timing**

- With respect to new technical requirements, Microsoft emphasized the importance of providing adequate time to develop technical standards and adequate time to develop, produce, and test devices incorporating that new technology. New requirements should explicitly apply only to new devices because backward compatibility is not always possible.

Finally, many of the proposals involve not only potential benefits but also risks and costs. As with any software or hardware changes, those risks and costs should be weighed against the necessity of, and demand for, such a feature.

Respectfully submitted,



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cc (via e-mail): Marcus Brown  
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